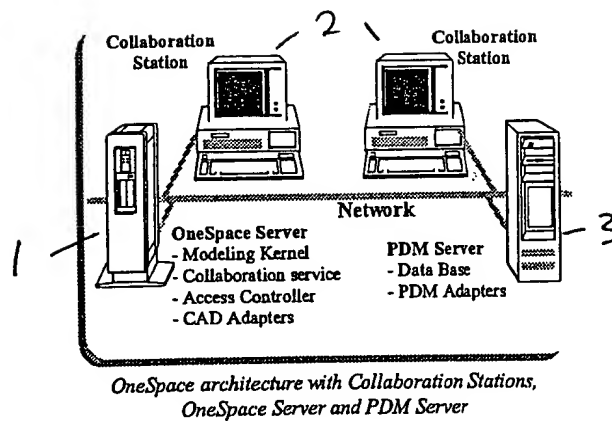
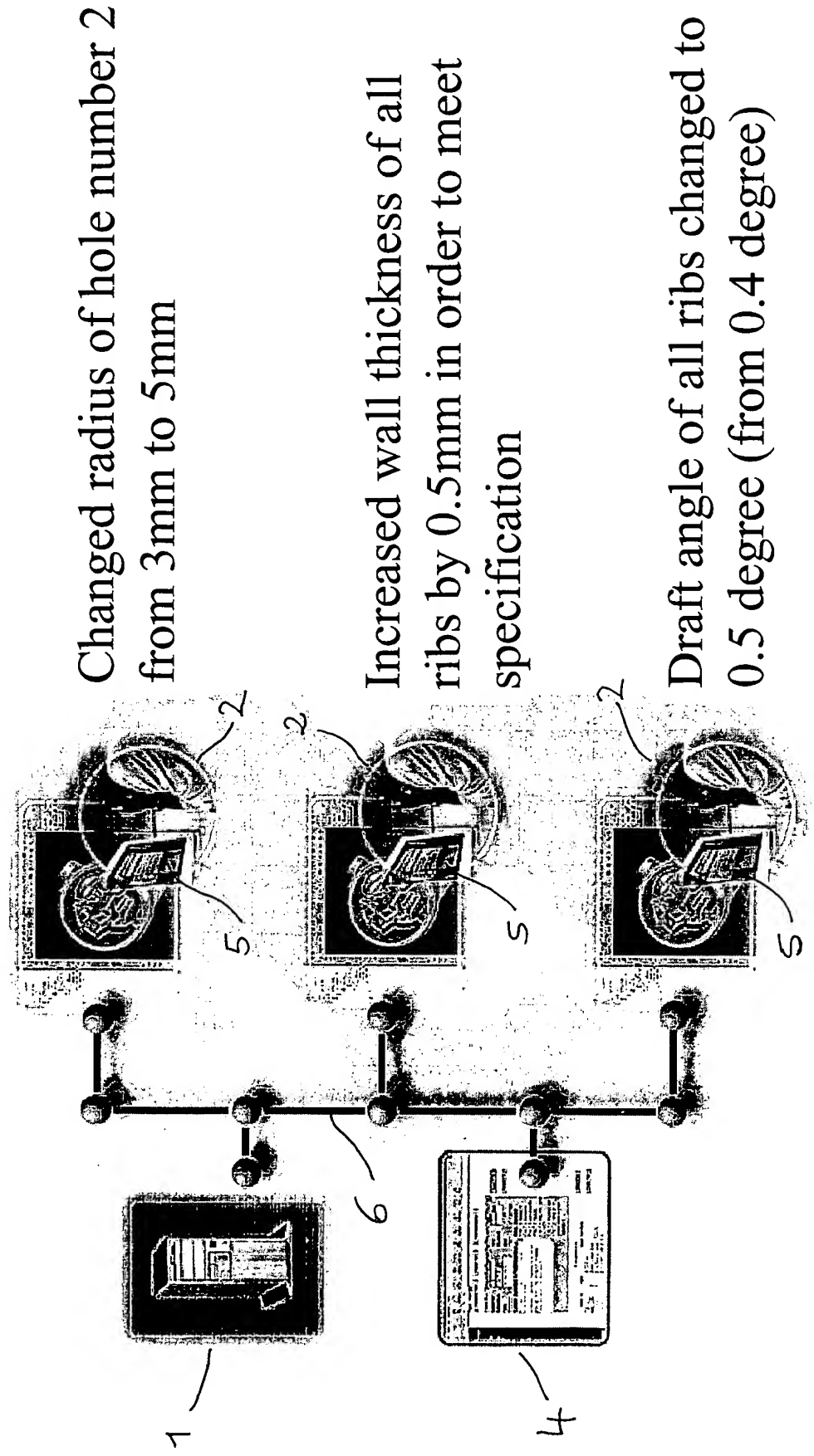


Fig. 1



Design Changes are done virtually at the same time by all people involved Fig. 2



All people involved in the product development
process meet in a virtual environment

Fig. 3

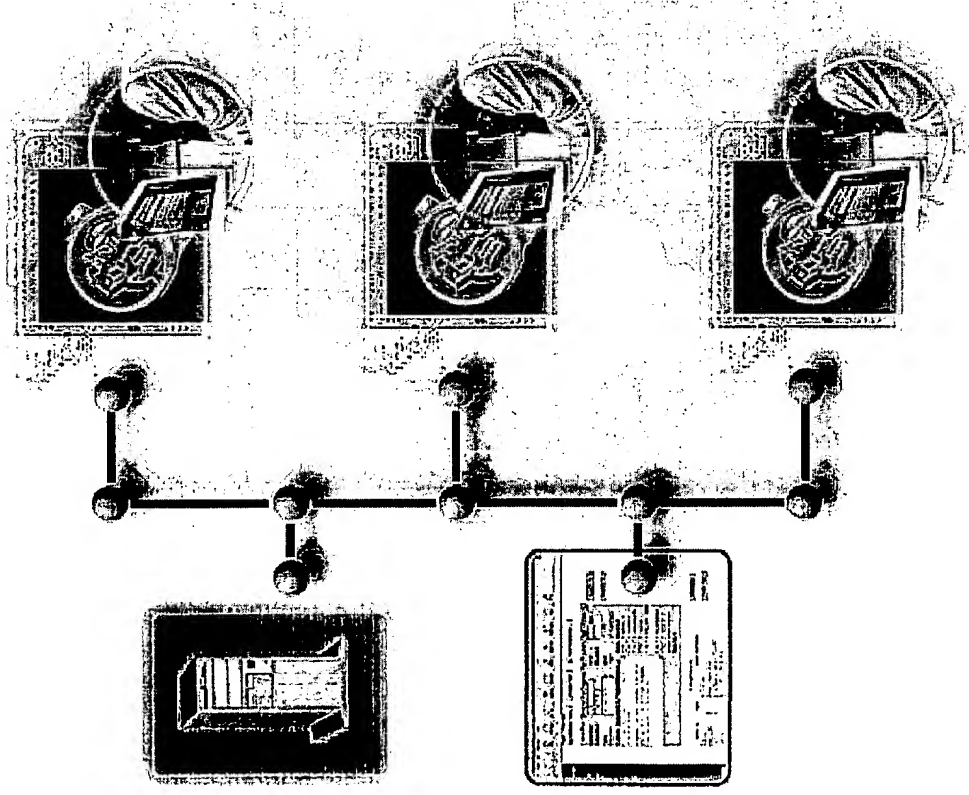


Fig. 4

Collaboration Log contains all information required to understand what changes were done by whom for what reason

Collaboration Log 1

Name: Mechanical Designer X
Location: Sindelfingen, Europe
Date: 12, October 1999
Time: 9:12am
Computer: 15.143.12.12
Description: Changed radius of hole number 2 from 3mm to 5mm
Operation: Change_hole
Object: hole_id
Value: 3
Dependencies: none
Status: agreed

Collaboration Log 2

Name: Finite Element Analyst Y
Location: Fort Collins, Colorado, US
Date: 12, October 1999
Time: 9:11am
Computer: 15.144.128.04
Description: Increased wall thickness of all ribs by 0.5mm in order to meet specification
Operation: Offset_faces
Object: face_1_id, face_2_id, face_3_id, face_4_id
Value: 0.5mm
Dependencies: Log 3
Status: agreed

Collaboration Log 3

Name: Manufacturing subcontractor Z
Location: Kobe, Japan
Date: 12, October 1999
Time: 9:15am
Computer: 22.255.128.22
Description: Draft angle of all ribs changes to 0.5 degrees (from 0.4 degrees)
Operation: Taper_faces
Object: face_1_id, face_2_id, face_3_id, face_4_id
Value: 0.5mm
Dependencies: Log 2
Status: agreed